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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,998	12/09/2003	Dong-Yeon Kim	1793.1055	2804

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EXAMINER

PARK, ILWOO

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 10/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,998

Applicant(s)

KIM, DONG-YEON

Examiner

Ilwoo Park

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claim 1 is amended and claims 3 and 11-16 are canceled in response to the last office action. Claims 1 and 4-10 are presented for examination.

Response to Arguments

2. Applicant's arguments filed 8/21/2006 have been fully considered but they are not persuasive.

In the Remarks, Applicant argues in substance that a) the positive indication (LED 'on' for connected and LED 'off' for not connected) of the connection in order to notify the user of cause of the abnormality by turning off the LED or not turned on when the ATAPI drive is not connected is not merely a design choice and b) Thorland does not discuss setting a flag to check the connection state of an I/O cable. x

However, the Examiner respectfully disagrees. For the point a), the visual LED indicator to a user may be dependent upon the user's operating situation. One user, such as a manufacturer or a tester frequently testing cables, may prefer the LED on noticeably indicating a 'normal or pass' to the user. One user, such as a consumer, may prefer the LED on or blinking as a fault indicator noticeably indicating an abnormal connection to the user; the user may not notice or care of the LED turned on or off when the ATAPI drive is in normal operation with the host; the user doesn't look for a cause of the abnormality until the ATAPI drive is not operated with the host. in other words, the user does not check the LED turned on prior to operate the ATAPI drive with the host; or the user does not make sure the cable connection prior to operate the ATAPI drive with the host. The user doesn't look for a cause of the abnormality until the ATAPI drive

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is not operated with the host. Further, the LED turned off from on state or initially off and continuously off does not call the user's attention strongly for indicating the abnormality; the LED off may not provide the cause of the abnormality because the LED could be off for other situations: such as, when no power is supplied to the LED, the apparatus is not power, or the LED itself is bad or bad connected, etc.

For the point b), Thorland discloses a routine checking the connection state of the cable during power-up; the routine has a start [col. 7, lines 21-32] as a flag set and an end of checking [col. 7, lines 33-40] as a flag clear.

Thus, the arguments are not persuasive and the rejections are respectfully maintained.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 6-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Thorland et al., US patent No. 6,457,071.

As to claim 6, Thorland et al teach a method of indicating a connection state of an input/output cable [connection cable 201] via which an AT Attachment Packet

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Interface (ATAPI) drive [col. 1, lines 23-26] communicates with a host [host computer. 100 in fig. 1], the method comprising:

when power is applied to the AT Attachment Packet Interface (ATAPI) drive, setting a flag that checks [col. 7, lines 23-32] the connection state of the input/output cable;

if a command [col. 6, lines 27-38] is not received from the host for a predetermined period of time [col. 9, lines 18-28] after the flag is set, commanding a timer to increase a time counter; and

if the increased time exceeds a reference time ['certain period of time' in col. 9, lines 18-28], indicating [col. 9, lines 18-28] that the input/output cable is not connected to the host.

5. As to claims 7 and 9, Thorland et al teach the controller clears the set flag when the command is received from the host for the predetermined period of time [col. 7, lines 33-39].

6. As to claim 8, Thorland et al teach the controller clears the set flag after the indicator indicates that the input/output cable is not connected to the host [col. 7, lines 33-39; col. 8, lines 49-54; col. 10, lines 39-42].

7. As to claim 10, Thorland et al teach if the command is received from the host, signaling that the input/output cable is connected [col. 8, lines 49-54].

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 1, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thorland et al., US patent No. 6,457,071.

As to claim 1, Thorland et al teach an apparatus [software and/or hardware in col. 11, lines 49-53] for indicating a connection state of an input/output cable, comprising:

an indicator [col. 9, lines 18-28] that is a communication device between an AT Attachment Packet Interface (ATAPI) drive [col. 1, lines 23-26] and a host [host computer 100 in fig. 1] interconnected via the input/output cable [connection cable 201] and that indicates [col. 9, lines 18-28] in response to a control signal whether the AT Attachment Packet Interface (ATAPI) drive is connected to or disconnected from the host via the input/output cable; and

a controller that sets a flag to check [col. 7, lines 23-32] the connection state of the input/output cable, when power is applied to the AT Attachment Packet Interface (ATAPI) drive, and outputs [col. 7, lines 33-39] the control signal to the indicator to indicate that the input/output cable is not connected to the host when a command [col. 6, lines 27-38] is not received from the host for a predetermined period of time ['certain period of time' in col. 9, lines 18-28; col. 7, lines 49-54]; and

a timer that counts a time required for receiving the command from the host [col. 9, lines 18-28; col. 7, lines 49-54],

wherein the indicator is a light emitting diode [col. 9, lines 24-29].

However, Thorland et al do not disclose the indicator turns on in response to the control signal output from the controller, when the host is connected to the AT Attachment Packet Interface (ATAPI) drive via the input/output cable, and turns off when the host is not connected to the AT Attachment Packet Interface (ATAPI) drive via the input/output cable. Rather, Thorland et al oppositely disclose the indicator turns off in response to the control signal output from the controller, when the host is connected to the AT Attachment Packet Interface (ATAPI) drive via the input/output cable, and turns on when the host is not connected to the AT Attachment Packet Interface (ATAPI) drive via the input/output cable [col. 9, lines 18-28]; however, it would be obvious to one of ordinary skill in the art as a design choice.

10. As to claim 4, Thorland et al teach the controller clears the set flag when the command is received from the host for the predetermined period of time [col. 7, lines 33-39].

11. As to claim 5, Thorland et al teach the controller clears the set flag after the indicator indicates that the input/output cable is not connected to the host [col. 7, lines 33-39; col. 8, lines 49-54; col. 10, lines 39-42].

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

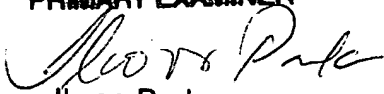
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ilwoo Park whose telephone number is (571) 272-4155. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ILWOO PARK
PRIMARY EXAMINER



Ilwoo Park

October 20, 2006